



**MassWildlife**



Photos by Bill Byrne

are energy efficient in that when given the choice between a meal that has to be chased or one that is easily found in a backyard, they will always pick the easy meal. Everything these species do is related to the availability of food.

Here are some simple rules for living with wildlife that are attracted to areas near humans. These rules will help your surroundings become less attractive to wildlife species and may prevent conflicts with wildlife from arising.

- 1) Don't feed wildlife!** Direct feeding can alter an animal's normal behavior. Problems occur when animals habituate to humans through a prolonged period of direct and/or indirect feeding.
- 2) Keep all trash around your yard contained and picked up.** Do not put your trash out for pick up the next day unless it is in a sealed container that wildlife species cannot get into as many wildlife species are most active at night.
- 3) Keep compost in a container that allows the material to vent but keeps wildlife from getting into it.**
- 4) Do not feed pets outdoors.** This attracts wildlife right to your door.
- 5) Do secure your pets.** Although free roaming pets are more likely to be killed by automobiles than by wild animals, there are wildlife species like coyotes that view cats as potential prey and dogs as competition for mates and food resources. For the safety of your pets, keep them restrained at all times.

Massachusetts has many wildlife species that do well living near people. These are relatively common animals such as skunks, raccoons, gray fox, red fox, coyotes, wild turkey, black bear, fishers and more...

These species are attracted to human dominated landscapes because they are highly adaptable, opportunistic feeders that are energy efficient. By highly adaptable we mean that they can easily adjust to changes in their environment. Opportunistic feeders in that most are generalists eating a variety of plant and animal material including food left around by humans. They





- 6) **Do remove bird feeders especially if problem wildlife species are seen around the feeders.** The seed in birdfeeders can attract many small and medium sized mammals (squirrels, chipmunks, mice) these, in turn attract animals that prey on squirrels, chipmunks, mice, et cetera. If possible, try to find a birdfeeder that does not allow seed to spill onto the ground.
- 7) **Close off crawl spaces under porches and sheds.** Wildlife will use these areas as dens for resting and raising their young.
- 8) **Do protect livestock and produce.** Wildlife species will prey upon livestock. There are techniques for protecting livestock from predation. Fencing can be useful in keeping wildlife out of certain areas. It is a good idea to clear fallen fruit from around fruit trees in the fall so as not to attract wildlife species.
- 9) **Don't approach or try to pet wildlife.** Don't provoke an encounter by moving too close to a wild animal or by restricting its free movement.
- 10) **Do educate your neighbors.** Pass this information along since your good efforts could be futile if neighbors are purposely or unintentionally providing food or shelter for wildlife.

The wildlife species that thrive in suburban environments are among the most adaptable and most interesting animals. Inevitably there are occasions when conflicts arise. If you experience property damage or if an animal appears ill, contact the closest *MassWildlife* District Office or Westborough Field Headquarters during business hours. If a problem requires immediate response contact local public safety officials or the Massachusetts Environmental Police at 1-800-632-8075.



For more information contact **MassWildlife** at:

**Western Wildlife District, Pittsfield:** (413) 447-9789

**Connecticut Valley Wildlife Dist., Belchertown:** (413) 323-7632

**Central Wildlife District, West Boylston:** (508) 835-3607

**Northeast Wildlife District, Acton:** (978) 263-4347

**Southeast Wildlife District, Bourne:** (508) 759-3406

**Field Headquarters, Westborough:** (508) 792-7270

or visit our website at [www.masswildlife.org](http://www.masswildlife.org)



# Living With Wildlife

## The Black Bear in Massachusetts

**MassWildlife**



Photo by Bill Byrne

Though Massachusetts is the third most densely populated state in the country (6 million people living in 5 million acres), black bears have been increasing in numbers and distribution for the past 30 years. They are common in western Massachusetts, moderately common in the central region, and rarely found in eastern counties.

**Description:** Black bears are black overall with a brown muzzle and sometimes a white chest patch. Their feet are large and well padded, with moderately-sized curved claws. Male black bears generally range in weight from 130 to 600 lbs. and females from 100 to 400. In Massachusetts, males average 230 lbs. and females 140. Lengths range from  $3\frac{1}{2}$  to 6 feet and shoulder height from  $2\frac{1}{2}$  to  $3\frac{1}{2}$  feet.

**Life History:** Black bears have good eyesight, hearing and an extraordinary sense of smell which is used to locate food and recognize potential danger. They are excellent climbers and commonly use trees for resting and es-

cape cover and to protect their young. Black bears mate between mid-June and mid-July. After breeding, the fertilized egg develops into a minute ball of cells which remains free-floating in the uterus and implants in the uterine wall in late November if the female is well nourished. The small cubs are born in the den in mid- to late January. Litter sizes are usually 2 or 3. Cubs exit the den in early to mid-April and remain with the mother for about 17 months, at which time she comes into estrus (heat) again and chases the yearling bears away. Young females take up residence near their mother's area, but the young males wander for many miles. Bears are active in daytime during spring and fall, but are more active during dawn and dusk hours in summer.

**Food:** Bears are omnivores, meaning that they eat both vegetation and flesh. Much of their diet consists of vegetative matter. In spring bears consume lush emergent vegetation like skunk cabbage and leftover nuts in hardwood areas. In summer, emerging berry crops are preferred. Corn fields and oak, beech, or hickory stands are favored in fall. They also eat grubs, insects, feed on carrion (dead animals) and occasionally prey on young deer. Bears are also known to visit birdfeeders, cornfields, orchards and beehives. Bears have good long-term memory and can remember the location of food sources years after the first visit.

Adult females bears use home ranges averaging 9 to 10 square miles while adult males may have ranges exceeding 120 square miles. Depending on food availability, bears enter the den between mid-November and early December and exit between early March and mid-April. Bears commonly den in brush piles, under fallen trees or a jumble of rocks, or in a mountain laurel thicket. During this period they sleep soundly but may wake up and forage in mild weather or they may bolt if frightened.

### WHAT TO DO WHEN YOU SEE A BEAR

**Hikers, Hunters, Wildlife Viewers and Other Outdoor Users** — Despite popular belief, black bears are wary of people. In woodland areas, bears may disappear long before they are seen by people. Sometimes, a bear may not immediately recognize you as a human and may be curious until it scents you. Make the animal aware of you by clapping, talking, or making other sounds. Do not approach bears. Do not intrude between a female bear and her cubs. Keep dogs restrained and stay a respectful distance away while enjoying this fascinating animal.

**Homeowners/Campgrounds/Businesses** — A bear's first response to something unusual is to flee. If a bear is feeding in your yard, on a porch or in a dumpster, run out at it, yell and makes lots of noise. The bear will leave—accompanied by its young.

**Police Departments** — Sometimes bears wander through residential areas. Never try to approach or pursue a bear if one should show up. Usually the bear found its way into the situation and will likely find its way out if given the chance especially in semi-suburban and rural areas. Tell callers to leave the animal alone. If the bear is in a highly populated area, call the Environmental Police 24 hour radio room (1-800-632-8075) or MassWildlife. To protect the lives of people and wildlife, MassWildlife and the Environmental Police formed an interagency Large Animal Response Team (LART) to respond to situations where bear are discovered in heavily human populated areas. The team members, MassWildlife biologists and Environmental Police Officers, have specific training in chemical immobilization of large animals, primarily moose and bear. There are 4 options available to wildlife professionals when dealing with suburban or urban bear situations. 1) Keeping tabs on the animal from a distance, or "baby-sitting" as it is sometimes called. 2) Encouraging the bear to go in a specific direction by using hazing techniques. 3) Immobilizing the bear if it becomes cornered and can be confined to an area. Where practical, trained staff from MassWildlife and/or the Environmental Police will be on hand to exercise this option. 4) The last resort, when an immediate threat to public safety exists, is to destroy the bear with a firearm.

## **PREVENTING CONFLICTS WITH BEARS**

**Do NOT Feed Bears** — Keep the "wild" in "wildlife". Bears which become accustomed to humans and dependent on human-associated foods are likely to cause property damage and become a nuisance. Sometimes it places the bear in jeopardy of being destroyed because it is no longer afraid of people.

**Take down birdfeeders** before April 1 put them back up in late November or early December. Do not leave pet food outside.

**Secure Trash in Closed Containers in a Garage or Other Outbuilding** — Put trash barrels out the morning of trash pick up, not the previous evening. Businesses and campgrounds in bear country should consider using bear proof dumpsters.

**Beekeepers** — Use temporary or permanent electric fences to safeguard hives.

**Protect Orchards and Crops** — Temporary electric fencing may be used to protect corn and other crops. Seven-strand slanted non-electric fences have been used to keep bears out of orchards. Contact local bear hunters to for the early September bear season to hunt the fields.

**Protect Livestock** — When possible, pen livestock in or near the barn at night, especially pregnant females or those with small young. Avoid field birthing if possible. Do not leave carcasses of dead animals exposed in fields, pastures or nearby areas. Consider the use of guard animals if you have a large or valuable livestock operation.

Bears are important and valuable mammals in Massachusetts. They are classified as big game mammals for which regulated hunting seasons and management programs have been established. If you are experiencing problems with bears or have any questions regarding them, contact your nearest **MassWildlife** District Office. More detailed information on bears is also available on our website: [www.mass.gov/masswildlife](http://www.mass.gov/masswildlife).



For more information contact **MassWildlife** at:

**Western Wildlife District, Pittsfield:** (413) 447-9789

**Connecticut Valley Wildlife Dist., Belchertown:** (413) 323-7632

**Central Wildlife District, West Boylston:** (508) 835-3607

**Northeast Wildlife District, Acton:** (978) 263-4347

**Southeast Wildlife District, Bourne:** (508) 759-3406

or visit our website at [www.masswildlife.org](http://www.masswildlife.org)



**MassWildlife**

# Living With Wildlife

## The Beaver in Massachusetts



DFW Staff Photo

Beavers are abundant throughout most of Massachusetts, but are uncommon in southeastern Massachusetts and absent from Cape Cod and the islands. Beavers favor habitat containing shrubs and softwood trees, flat terrain, and perennial streams that can be dammed to create ponds. They are unique among wild mammals in that they alter their habitat to meet their needs. They do this primarily by damming up small rivers and streams to form ponds.

**Description:** Beavers are North America's largest native rodents, weighing between 35 and

80 pounds as adults. They can be 2-3 feet in length, with an additional 10-18 inches for the tail. Males and females are similar in size. Beavers typically have a dark brown to reddish brown fur coat. Large, webbed hind feet and a flat, wide leathery tail help them to move swiftly in water. An animal often mistaken for the beaver is the much smaller muskrat, which is another aquatic rodent. However, muskrats weigh only 2-3 pounds and have a narrow, rat-like tail.

**Life History:** Adult beavers have few predators and may live up to 20 years or more. They stay with the same mate for life and breed during winter (January through March). The females give birth to 1-9 kits inside a lodge between April and June. These kits stay with their parents through two winters before dispersing the following spring. A single family unit is called a colony, and is typically made up of 6-8 individuals; two adults, that year's kits, and the young from the previous year.

**Foods:** Beavers are strict vegetarians. They feed on a variety of aquatic plants (especially water lilies) and the shoots, twigs, leaves, roots, and bark of woody plants. The bark, particularly the inner bark of trees and shrubs, are important foods, especially in winter. Aspen, birch, alder, and willow are particularly favored foods.

**Beneficial Aspects:** Since European settlement, more than half of the wetlands in the lower 48 states have been lost. By damming streams and forming shallow ponds, beavers create wetlands. These wetlands provide habitat for a tremendous diversity of plants, invertebrates, and wildlife. People benefit too. Wetlands control downstream flooding by storing and slowly releasing floodwater. They also improve water quality by removing or transforming excess nutrients, trapping silt, binding and removing toxic chemicals, and filtering out sediment.

### Resolving a Conflict

There are 5 main options for resolving a conflict with beaver:

**1. Tolerance** – People who learn to tolerate a certain amount of beaver influence on their land generally find that co-existing with beavers provides far more benefits than perceived harm.

**2. Exclosures** – Fencing can prove a long-term solution, while preserving the beneficial aspects of beavers. The most effective way to protect specific trees and shrubs is to construct exclosures around them. These exclosures should be constructed of heavy-gauge fencing, be a minimum of 4 feet tall, and be flush with the ground. To protect larger areas, such as orchards or nurseries, standard fencing is usually sufficient since beavers are poor climbers, rarely burrow under fences, and generally don't chew fencing unless it is wrapped tightly around trees or shrubs.

**The following three options require permits or a trapping license.** To find out how to obtain the proper permits to conduct the following activities, please read our "Beavers and the Law: A citizen's guide to addressing beaver complaints" available on our website at: [www.masswildlife.org](http://www.masswildlife.org).

**3. Breaching and removing the dam** – Dam breaching is an immediate, but short-term solution to flooding problems caused by beaver. Cued by the sound of escaping water, beavers will usually rebuild the damaged dam quickly, sometimes overnight.

**4. Water Level Control Devices (WLCD)** – Sometimes referred to as "beaver pipes" WLCDs can regulate water at desirable levels behind dams. By successfully installing an effective WLCD, the life of a beaver wetland, and its associated benefits, can be prolonged.

**5. Lethal removal** – Removal of problem beaver can be a quick way to alleviate beaver problems when done by an experienced trapper. Beavers can be trapped during the open season (November 1-April 15) by a licensed trapper using permissible traps (i.e. box or cage-type traps). By removing beaver during the regulated trapping season they can be used as a natural resource. An Emergency Permit is needed to trap beavers with restricted traps (i.e. body-gripping traps, "Conibear" traps) and to trap beaver outside the regulated trapping season.

It is against state law to capture and release beaver into another area. Often people want to capture problem animals and release them someplace else. However, moving wildlife is harmful to both people and wildlife populations and is against the law. This law has been in effect for many years, protecting both people and wildlife.

Beavers are an important natural resource in Massachusetts. They are classified as a furbearer species, for which an established regulated hunting season and management program exists. If you are experiencing problems with, or have questions regarding beaver, contact your nearest MassWildlife District office. Further information on beavers and other native furbearing species is also available at [www.mass.gov/masswildlife](http://www.mass.gov/masswildlife).

June 2006



For more information contact MassWildlife at:

Western Wildlife District, Pittsfield: (413) 447-9789

Connecticut Valley Wildlife Dist., Belchertown: (413) 323-7632

Central Wildlife District, West Boylston: (508) 835-3607

Northeast Wildlife District, Acton: (978) 263-4347

Southeast Wildlife District, Bourne: (508) 759-3406

Field Headquarters, Westborough: (508) 792-7270

or visit our website at [www.mass.gov/masswildlife](http://www.mass.gov/masswildlife)





**MassWildlife**



Photo © by Bill Byrne

# Living With Wildlife

## Eastern Coyotes in Massachusetts

The eastern coyote, *Canis latrans*, is well established throughout most of Massachusetts except on Nantucket and Martha's Vineyard. A medium sized predator, it is an opportunistic feeder and extraordinarily adaptable to a wide range of habitats. Coyotes thrive in suburban/urban as well as rural areas, and will utilize whatever food is naturally available, including small animals, birds, insects and fruits, as well as artificial sources such as garbage, pet food, birdseed and compost. Take precautions to eliminate any food sources in your yard and neighborhood to avoid creating problems with coyotes.

**Never deliberately provide food for coyotes!**

**Description:** The eastern coyote resembles a medium-sized dog in body size and shape, but has longer, denser fur and pointed, erect ears. The tail is long, black-tipped, and bushy. Typical coat color is a grizzled gray but can vary from creamy blonde to red or nearly solid black. Typical weights for females are 33-40 pounds, while males typically range between 34-47 pounds. A very large male may weigh in the neighborhood of 60 pounds, but such an animal is exceptional. Coyotes often look heavier than they are because of their thick fur.

**Life history:** An adult male and female will actively maintain a territory that may vary in size from 2 to 30 square miles. Breeding season peaks in mid February, followed by 4 - 8 pups born in a den in April or May. Coyotes maintain seasonal social units that consist of the adult pair and the pups until the pups disperse on their own in late autumn.

**Habits:** Coyotes are typically shy and elusive, but they can frequently be seen individually, in pairs, or in small groups where food is commonly found. They communicate by vocalizing, scent marking and through a variety of body displays. It is common to hear them howling and yipping at night, or even during the day in response to sirens and other loud noises. Coyotes remain active year-round and do not hibernate.

**Food:** Coyotes are opportunistic feeders, meaning they will feed on whatever is most readily available and easiest to obtain. Their omnivorous diet consists of a variety of foods including rodents, rabbits, deer, birds, insects, reptiles, fruits, and berries. They will scavenge road kills, rodents and birds killed by cats, as well as garbage and pet food left outdoors. In suburbia, they have been known to prey on unprotected pets, including house cats and small dogs. Pet owners are advised to keep cats indoors, and dogs under control during the day and in secured kennels or indoors at night.

### Help Keep Coyotes Wild

Coyotes thrive in suburban and urban areas. To avoid problems with coyotes and to make your property less attractive to them, you should follow some basic practices:



#### Secure Your Garbage

Coyotes raid open trash materials and compost piles. Secure your garbage in tough plastic containers with tight fitting lids and keep them in secure buildings when possible. Take out trash when the morning pick up is scheduled, not the previous night. Keep compost in secure, vented containers, and keep barbecue grills clean to reduce attractive odors.



## Don't Feed or Try to Pet Coyotes

Keep wild things wild! Feeding, whether direct or indirect, can cause coyotes to act tame and may lead to bold behavior. Coyotes that rely on natural foods remain wild and wary of humans.



## Keep your Pets Safe

Although free roaming pets are more likely to be killed by automobiles than by wild animals, coyotes do view cats and small dogs as potential food, and larger dogs as competition. For the safety of your pets, keep them restrained at all times.



## Keep Bird Feeder Areas Clean

Use feeders designed to keep seed off the ground, as the seed attracts many small mammals coyotes prey upon. Remove feeders if coyotes are regularly seen around your yard.



## Feed Pets Indoors

Outdoor feeding attracts many wild animals to your door!



## Close Off Crawl Spaces under Porches and Sheds

Coyotes use such areas for resting and raising young.



## Don't Let Coyotes Intimidate You

Don't hesitate to scare or threaten coyotes with loud noises, bright lights, or water sprayed from a hose.



## Cut Back Brushy Edges in your Yard

These areas provide cover for coyotes and their prey.



## Protect Livestock and Produce

Coyotes will prey on livestock. Various techniques, such as fencing, will protect livestock from predation. Clear fallen fruit from around fruit trees.



## Educate your Neighbors

Pass this information along: Your efforts will be futile if neighbors are providing food or shelter for coyotes.



For more information contact **MassWildlife** at:

**Western Wildlife District, Pittsfield:** (413) 447-9789

**Connecticut Valley Wildlife Dist., Belchertown:** (413) 323-7632

**Central Wildlife District, West Boylston:** (508) 835-3607

**Northeast Wildlife District, Acton:** (978) 263-4347

**Southeast Wildlife District, Bourne:** (508) 759-3406

or visit our website at [www.masswildlife.org](http://www.masswildlife.org)



**MassWildlife**

# Living With Wildlife

## Canada Geese in Massachusetts



Perhaps no sound more clearly evokes an image of wildness than the honking of migrating geese. Canada geese have passed through Massachusetts on their journeys to and from their arctic breeding grounds for centuries. Prior to the 1930s, it was unusual for geese to nest here, yet today in Massachusetts you can find Canada geese any time of the year. In fact, in some areas, people feel that there are too many geese! Why the change?

**Description:** Canada geese are large birds, averaging 10-14 pounds. Among waterfowl (ducks, geese & swans) of North America, Canada geese are second only to swans in size. Their long black neck and white cheek markings are particularly distinctive.

**Life History:** The Canada goose is a grazer. Geese form permanent pair bonds, but if one bird dies, the other will seek a new mate in the next breeding season. Most Canada geese don't begin nesting until they are three years old. Adult females lay 4-6 eggs in a clutch. If the clutch is destroyed, geese generally don't re-nest, but with two large birds guarding a nest, the chances of success are good. Usually by the time the young are 4-6 weeks old, the broods begin gathering in large flocks. Non-breeders and yearlings form separate flocks. By fall, they all gather into one large flock for the winter.

In Massachusetts, there are two different populations of Canada geese. The first is the migratory population which passes through in the spring and fall. Massachusetts is one of many resting areas for these migrating birds. The second is the resident population: descendants of captive geese used by waterfowl hunters. When live decoys were outlawed in the 1930s, many captive birds were liberated. With no pattern of migration, these geese began nesting. Lawns at houses, golf courses and mowed parks, well-watered, fertilized and bordering water, provided an excellent source of food. In suburban areas, there were few predators. The habitat for grazers was perfect. In the 1960s and early '70s a "translocation" project carried out by MassWildlife involved moving birds from the coast into central and western Massachusetts to the applause of both hunters and non-hunters. No one imagined the population explosion which followed.

With the above factors and town-imposed restrictions on hunting, resident goose flocks grew. In 1983, MassWildlife biologists estimated 10-12,000 of the geese were probably year-round residents. By 1997, survey estimated 38,000 geese statewide. As goose numbers increased, so did problems, especially with goose droppings (poop). Canada geese produce from half pound to a pound and half of droppings per day. Now geese are on golf courses, in gardens, over shellfish beds, on lawns, beaches, water supplies and cranberry bogs. What can be done?

## **PREVENTING GOOSE GRIEF**

Here are a few suggestions to prevent goose grief. Keep in mind that *persistence* and a *combination of tactics* will keep geese from becoming pests:

**DON'T FEED GEESE** — Geese (and ducks) concentrate wherever people feed them. Feeding encourages birds to stay in one place and build up flock sizes the habitat can't support. Water quality may suffer. Feeding makes geese less wary of people. It is in the birds' best interest to stop providing them with food.

**SCARE TACTICS** — Putting out flags, tying aluminum pie plates along strings, using scarecrows all may help keep geese away from an area until they learn these objects pose no threat. Full bodied swan or coyote decoys sometimes work because geese perceive the decoys as threats. It's important to move decoys periodically or the geese will realize the decoys aren't real. For an active approach, try walking up to the birds then flapping a tablecloth. Trained dogs are especially effective. Loud noises may also work, but geese can adapt to noise.

**BARRIERS** — Geese walk to their feeding site from water, and will rarely fly over a fence, especially during the molting period (summer) when the birds are flightless. A 3-foot chicken wire fence is an effective barrier. Geese like to be able to see around them, therefore, planting a hedge or leaving a wide swatch of uncut weeds between water and mowed grass creates a natural, low maintenance barrier.

**HUNTING** — The problem is not the presence of geese but the number of birds. Even when geese are discouraged by the above tactics, they still move elsewhere, bringing problems to other areas. To achieve a reasonable comfort level for both geese and people, the number of geese must be reduced. Geese have been hunted for centuries and their tasty meat is prized. Timing of hunting seasons, length, number of birds that can be taken, and hunting methods are strictly regulated. Some municipal ordinances effectively prohibit hunting, inadvertently creating "sanctuaries" that allow buildup of flocks. In 1995, the Massachusetts Fisheries & Wildlife Board instituted special "early" and "late" goose seasons designed specifically to only reduce the resident goose population. Recent studies indicate that for populations to be controlled, at least 30-35% need to be harvested annually. Currently the hunting harvest is at 25%.

Creative solutions allowing for hunting geese in season include: golf clubs and race tracks inviting waterfowlers on to their grounds at designated hours, towns networking with sportsmen's clubs to find waterfowl hunters who hunt municipal properties and reservoirs within certain guidelines; and landowners opening their lands to hunters willing to abide by any restrictions the landowner may impose.

Canada geese are important and valuable birds in Massachusetts. They are classified as waterfowl species for which a regulated hunting season and management program have been established. If you are experiencing problems with geese or have any question regarding them, contact your nearest MassWildlife District Office. Further information on geese and other wildlife is also available on our website [www.masswildlife.org](http://www.masswildlife.org).

(6/04)



For more information contact **MassWildlife** at:

**Western Wildlife District, Pittsfield:** (413) 447-9789

**Connecticut Valley Wildlife Dist., Belchertown:** (413) 323-7632

**Central Wildlife District, West Boylston:** (508) 835-3607

**Northeast Wildlife District, Acton:** (978) 263-4347

**Southeast Wildlife District, Bourne:** (508) 759-3406

or visit our website at [www.masswildlife.org](http://www.masswildlife.org)



**MassWildlife**



Photo © by Bill Byrne

# Living with Wildlife

## Fisher in Massachusetts

The fisher, *Martes pennanti*, is relatively common in many areas of Massachusetts, but due to its alert, secretive nature and generally solitary habits, most people have never seen this interesting predator. It was eliminated from the state by the 19<sup>th</sup> century due to agricultural land clearing that virtually eliminated its forest habitat, but it has made an amazing comeback that began during the 1960s. Once considered strictly a wilderness species, fisher now live in more populated areas that offer mature forest habitat and the squirrels that are its chief prey. Fisher are found throughout Massachusetts except in some areas of the southeast, Cape Cod, and the islands.

**Description:** The fisher is one of the largest members of the Mustelid or weasel family. Fishers exhibit what is referred to as sexual dimorphism (physical differences) in body size between males and females. Adult male fishers weigh 8 to 16 pounds and measure approximately 3 feet from head to tail. Adult female fishers are smaller than males, weighing 4 to 6 pounds and measuring approximately 2+ feet in length. In both males and females, the tail accounts for approximately  $\frac{1}{3}$  of the total body length.

The fisher exhibits the typical "weasel" shape with a long, slender body, short legs, and furred tail. It has a pointed face (although not as pronounced as fox or coyote) with large, rounded ears set close to the head. It is well adapted for climbing and has sharp, retractable claws similar to those of a domestic cat. Its coloration is generally a rich brown to black with grizzled grayish coloring on the head and shoulders and the darkest coloring occurring on the rump, tail, and legs. Females typically have the darkest fur. Individuals may also have irregular white patches of fur on their chest and lower abdomen.

**Life history:** Fishers breed from February to March and exhibit a reproductive strategy called "delayed implantation" that is common to members of the weasel family. The adult female breeds within days after giving birth, but the fertilized eggs remain dormant in her uterus for the next 10 to 11 months. Then the fertilized eggs implant in the uterine wall and begin normal development. The young are born 1 to 2 months after implantation occurs. Female fishers produce 1 litter each year consisting of 1 to 4 kits, with an average litter size of 3 kits.



Photo © by Bill Byrne

The young are born helpless, blind, and sparsely furred. Maternal dens, typically located in a cavity high in a large tree, are used for the first 8 to 10 weeks. Once the kits become mobile, they are moved from the maternal den to one on or below the ground. It is believed that the maternal den functions to protect the helpless young from aggressive male fishers and ground predators. The female nurses the kits until they reach 4 months of age. By five months of age the kits are approximately the same size as the adult female and have begun to learn how to kill their own prey. The young remain with the female until late summer or early fall, at which time they disperse to begin their solitary lives as adults. They reach sexual maturity at one year of age, and females produce their first litter at the age of two.

**Habits:** Fishers are shy and elusive animals that are rarely seen even in areas where they are abundant. They can be active day or night and tend to exhibit crepuscular (dawn and dusk) and nocturnal activity in the summer and diurnal (daytime) activity in the winter. They remain active year round and do not hibernate. Their preferred habitat is mixed forest with heavy canopy cover, as they tend to avoid traveling in large open areas. They commonly use hollow logs, stonewalls, tree cavities, and brushpiles for resting sites.

**Food:** Fishers are omnivorous. Their primary foods include small rodents, squirrels, rabbits, birds, eggs, fruit, porcupines, and carrion. They will also opportunistically prey on poultry and domestic cats. Although they are proficient climbers, most of their hunting takes place on the ground.

As with other wildlife species, problems with fishers may sometimes arise, but these are usually restricted to predatory attacks on domestic birds, rabbits, and free ranging housecats. Most problems involving fisher can be avoided by following a few basic practices:

**Remove any potential food sources.** Fishers are opportunistic feeders that will consistently hunt in areas where they have been successful in the past. Suspend supplemental bird feeding, as the seed attracts small mammals (particularly squirrels) which in turn attract fishers. It is also a good idea to secure trash, garbage, compost and pet food, as these are also potential attractants.

**Protect pets and poultry.** Fishers are predators that prey on medium sized mammals and poultry. Fishers view domestic cats and rabbits as food, and will prey on them when hunting. They will also raid chicken coops and can kill numerous chickens at a time. For their safety, cats should be kept indoors at all times. Pet rabbits and poultry should be kept in tightly secured buildings or hutches that prevent access by fishers.

**Educate your neighbors.** If you are experiencing problems with fishers in your yard, be sure to alert neighbors so they, too, can follow these basic practices.

The fisher is an important and valuable natural resource in Massachusetts. It is classified as a furbearer species, for which a regulated trapping season and management program have been established. If you are experiencing problems with fisher, or have any questions regarding this interesting predator, please contact your nearest MassWildlife District Office. Further information on fisher and other native furbearers is also available on our website: [www.masswildlife.org](http://www.masswildlife.org).



For more information contact **MassWildlife** at:

**Western Wildlife District, Pittsfield:** (413) 447-9789

**Connecticut Valley Wildlife Dist., Belchertown:** (413) 323-7632

**Central Wildlife District, West Boylston:** (508) 835-3607

**Northeast Wildlife District, Acton:** (978) 263-4347

**Southeast Wildlife District, Bourne:** (508) 759-3406

or visit our website at [www.masswildlife.org](http://www.masswildlife.org)



**MassWildlife**



# Living With Wildlife

## Moose in Massachusetts

Many people are surprised to learn there are moose (*Alces alces*) living in Massachusetts. Moose have been absent from the state since the early 1700s. As early settlers cleared the extensive forests in the state for pastures and farming, moose habitat disappeared and so did the moose. As recently as the 1970s a moose sighting was considered rare. Why are moose here now? Moose populations got a boost in northern New England from a combination of forest cutting practices and protection from hunting which created ideal moose habitat and allowed for high reproduction and survival rates. Gradually, as the population increased, moose moved southward into their historic range, and by the early 1980s moose moved into northern Worcester and Middlesex Counties and had begun to breed and disperse throughout central and western Massachusetts.

**Description:** Moose are the largest members of the deer family in North America. In the fall, an adult cow (female) moose can weigh from 500-700 pounds and a bull (male) moose will weigh anywhere from 600-1000 pounds. They can stand up to 6 feet tall at the shoulder including legs 3 to 4 feet in length. Only bulls grow antlers. These antlers begin growing in March to early April, and are fully grown by August when the velvet is shed. Antlers are shed beginning in December, though some young bulls retain their antlers until late winter. The bell, a flap of skin and long hair that hangs from the throat, is more pronounced in adult bulls than in cows or immature bulls.

**Life History:** Moose are most active between dawn and dusk. The breeding period for moose runs September through October. This is a time when many moose sightings are reported. The bull stays with the cow only long enough to breed; then he leaves for another cow. Both bulls and cows travel more during this time in pursuit of a mate. Females can breed as early as 1+ years of age. The other period of high moose activity is in May, when the young of the past year are driven off by the adult cow before she calves. Cows usually give birth to 1-2 calves between late May and the end of June. Moose calves weigh 20-25 pounds at birth. By fall they will have gained nearly 300 pounds!

**Food:** Moose, like deer, lack upper incisors; they strip off browse (twigs and other plants) and bark rather than snipping it neatly. During summer, moose prefer to feed in or near clearings and other open areas where they browse on tender leaves, twigs and tree bark as well as aquatic and semi-aquatic vegetation. Grasses, lichens, mosses, mushrooms and other herbaceous plants are also a part of their diet. In the summer, moose tend to seek food and relief from flies and mosquitoes by spending time in wetlands. Winter food mostly consists of needle bearing trees and hardwood bark, buds and twigs.

## WHAT TO DO WHEN YOU SEE A MOOSE

Wildlife viewers, hunters and other outdoor people may encounter a moose in their travels through Massachusetts forests. Stay a respectful distance away and enjoy this magnificent animal. In most cases, the moose will move off. During the breeding season in fall, or the calving season in spring, be especially cautious because bulls can be unpredictable and cows can be very protective of their calves. Keep dogs under control.

**Drivers — Brake For Moose; It Could Save Your Life!** — Be particularly alert, especially at night during the fall breeding season and in May and June when yearling moose are driven away by their mother. Moose will step out onto a roadway without showing the slightest concern for oncoming traffic. The dark body is difficult to see and its eyes are much higher than those of white tail deer.

**Suburban/Residential Homeowners** — With no natural predators in Massachusetts, moose are unwary as they move through populated areas, particularly during the mating season. Spring yearlings will sometimes appear in densely populated areas, having followed waterways or forests into the heart of an urban center. Never try to approach or pursue a moose. Pursuit not only stresses the animal, but it adds the risk of having a moose chased out into traffic or into a group of bystanders. Keep dogs under control. Leave the moose alone and call MassWildlife or the Environmental Police if the moose is in a highly populated area. Usually the moose will find its way out if given the chance, especially in semi-suburban and rural areas.

Options available for wildlife professionals when dealing with suburban or urban moose situations:

1. Watching the animal from a distance is often all that is needed to allow the moose to move on. Keeping people away from the animal is the bigger issue.
2. Encourage the moose to go in a specific direction by using hazing techniques.
3. If the animal is cornered and can be confined to an area, immobilizing drugs may be used. Trained staff from MassWildlife and/or the Environmental Police must be on hand to make this decision.
4. The last resort, only when an immediate threat to public safety exists, is to destroy the moose.

Moose are an important natural resource in Massachusetts and their recent return is a testament to the state's high quality wildlife habitat. MassWildlife is monitoring moose populations through sighting reports and roadkills. If you have a problem or further questions regarding moose, contact your nearest MassWildlife District Office or the Environmental Police.

**Environmental Police Radio Room 1-800-632-8075 available 24 hours / 7 days a week**

Further information on moose is available on our website at [www.masswildlife.org](http://www.masswildlife.org).



For more information contact MassWildlife at:

**Western Wildlife District, Pittsfield:** (413) 447-9789

**Connecticut Valley Wildlife Dist., Belchertown:** (413) 323-7632

**Central Wildlife District, West Boylston:** (508) 835-3607

**Northeast Wildlife District, Acton:** (978) 263-4347

**Southeast Wildlife District, Bourne:** (508) 759-3406

**Field Headquarters, Westborough:** (508) 389-6300

or visit our website at [www.mass.gov/masswildlife](http://www.mass.gov/masswildlife)



**MassWildlife**



# Living With Wildlife

## The Skunk in Massachusetts

their predators include Great-horned owls, coyotes, foxes and domestic dogs.

**Description:** Striped skunks are similar in size to domestic cats, weighing 6 to 10 pounds. They have pointed snouts and small, triangular heads with a white stripe on the nose and forehead. Typically the coat is black, with white stripes that extend down their nape and split into two white stripes on the back. These white stripes are as unique as human fingerprints; they vary for each individual. The tails of skunks are wide, long and bushy, and can be all black or have varying amounts of white. Due to their short legs, they appear to waddle when they walk and are generally poor climbers. However, they have strong forefeet and long nails, which make them excellent diggers.

**Life History:** Breeding season typically occurs from February through March. In late April and early May, the female will excavate a den and give birth to 2-10 kits, which are born blind and helpless. If disturbed, females will move their kits to a new den. The kits do not leave the den until they are approximately 6 to 8 weeks old. When they leave the den, the kits follow their mother in search of food and will den with her in alternate dens until they are independent at two to five months.

During the summer months, skunks typically sleep in retreats above ground; shaded areas in tall grass, under shrubs, in thickets, or under decks and building. They do not show much fidelity to above ground retreats, but will re-visit them from time to time.

Skunks are not true hibernators. When nighttime temperatures are above 30° F, skunks become active for periods of time. Thus, dog owners should beware on unusually warm winter nights. Skunks will be out and about, stretching their legs and searching for food. When temperatures stay below freezing however, skunks will sleep to conserve energy.

**Habits:** Striped skunks are typically docile mammals that tolerate humans in close proximity without showing aggression. The most distinguishing characteristic of all skunks is their ability to direct a stream or spray of musk for several meters from paired anal glands. The musk is a strong irritant to the eyes and nose, and acts as a depressant to the central nervous system. If threatened, skunks will give many warning signs before spraying their potential victim. If the potential threat does not leave, the skunk will begin to turn its hind-end towards the threat and begin to expose its anal glands and the bare skin surrounding them. This is the last warning a skunk gives before accurately directing a stream or fine mist of its musk at the perceived threat.

The striped skunk, *Mephitis mephitis*, is a common mammal found throughout the United States and southern Canada, except for some desert areas of the Southwest. Striped skunks are found throughout most of Massachusetts, except for the Elizabeth Islands and Nantucket. They are highly adaptable and use a variety of habitats including fields, open woodlands, wetlands, beaches, salt marshes, and agricultural areas, as well as urban and suburban developments. In Massachusetts,

**Food:** Striped skunks are omnivores and primarily eat insects, invertebrates and fruit. Striped skunks will also eat human garbage, compost, and birdseed from feeders. Thus, they can also be found around homes in urban and suburban areas. Their primary method of foraging involves digging, often appears as a single, small hole in a lawn, leaf litter, or sand.

## Help Keep Skunks Wild

Skunks, like several other wild animals, can thrive in suburban and urban areas. To avoid problems with skunks and to make your property less attractive to them, you should follow some basic rules.

**1. Remain calm when encountering a skunk!** Should you encounter a skunk, speak softly and move away in order to give it room to leave. Once you back away, the skunk will no longer feel threatened and will move off. If it doesn't, try clapping your hands and making some noise from a safe distance.

**2. Secure your garbage!** Skunks will raid open trash materials and compost piles. Secure your garbage in tough plastic containers with tight fitting lids and keep in secure buildings when possible. Take out trash the morning pick up is scheduled, not the previous night. Keep compost piles in containers designed to contain but vent the material.

**3. Feed pets indoors!** Outdoor feeding attracts skunks and other types of wild animals to your door!

**4. Close off crawl spaces under porches and sheds!** Skunks will use such areas for resting and raising young. Close shed and garage doors at night, and use chicken wire to keep skunks from digging under porches.

**5. Protect your pet from being sprayed!** Always turn on a flood light and check your yard for skunks before letting your dog out at night

**6. Keep bird feeder areas clean!** Use feeders designed to keep seed off the ground as the seeds can attract skunks. Remove feeders if skunks are seen regularly around your yard.

**7. Educate your neighbors!** Pass this information along since your efforts could be futile if neighbors are purposely or unintentionally providing food or shelter for skunks.

Skunks are an important natural resource in Massachusetts. They are classified as a furbearer species, for which established regulated hunting exists. If you are experiencing problems with, or have questions regarding skunks, contact your nearest MassWildlife District office. Further information on skunks and other native furbearing species is also available at [www.mass.gov/masswildlife](http://www.mass.gov/masswildlife).



For more information contact MassWildlife at:

**Western Wildlife District, Pittsfield:** (413) 447-9789

**Connecticut Valley Wildlife Dist., Belchertown:** (413) 323-7632

**Central Wildlife District, West Boylston:** (508) 835-3607

**Northeast Wildlife District, Acton:** (978) 263-4347

**Southeast Wildlife District, Bourne:** (508) 759-3406

**Field Headquarters, Westborough:** (508) 389-6300

or visit our website at [www.mass.gov/masswildlife](http://www.mass.gov/masswildlife)



# Living With Wildlife

## Gray & Red Squirrels in Massachusetts

**MassWildlife**

---

**Gray Squirrel**



Photo © by Bill Byrne

Both gray and red squirrels are common and abundant in Massachusetts. Gray squirrels are found everywhere, including Martha's Vineyard and Nantucket, while red squirrels are absent from both islands. Red squirrels are sometimes called "pine squirrels" or "chickarees"; the gray squirrel is also known as the "eastern gray squirrel." Both are members of the squirrel family (Sciuridae), along with flying squirrels, chipmunks, and woodchucks.

**Description:** Gray squirrels (*Sciurus carolinensis*) are medium-sized, tree-climbing squirrels. The sexes look similar, with adults averaging 15-20 inches in total length and tails averaging 6-9½ inches. They weigh about ¾-1½ lbs. Typically grizzled or light gray, they have white on the chin, throat, and belly. Melanistic (black) individuals occur in the northern parts of the gray squirrel's range. Black squirrels are common in the Westfield area of Massachusetts and occasionally found elsewhere. Population clusters of black squirrels are found in Westfield, Amherst, and Concord, with reports of individual black squirrels sighted in a number of other towns across the Bay State.

Red squirrels (*Tamiasciurus hudsonicus*) are small- to medium-sized tree squirrels. As is true for gray squirrels, the sexes look the same, adults are between 10½-15 inches long with tails averaging 3½-6 inches. They weigh about ½-5/8 lbs. True to their name, red squirrels are typically rusty red or reddish brown on the back and white or gray-white on the belly. The tail is rusty, sometimes tinged with yellow. Melanistic red squirrels are uncommon.

**Habitat:** Gray squirrels are tolerant of human presence and often live in urban or suburban areas with large, mature shade trees. Gray squirrels are also typically found in extensive mature hardwood forests—especially oak-hickory—often with dense understory vegetation. They are found less often in coniferous forests. Red squirrels are found primarily in coniferous forests—pine, spruce, or fir—with mature trees preferred. In suburban areas, they are often found in small pine plantations or woodlots interspersed with some hardwoods.

**Foods:** Squirrels live in the habitats that contain their preferred foods. Gray squirrels have diverse diets and feed on those items that are seasonally available. However, nut crops, such

as oak acorns, hickory nuts, beechnuts, and walnuts, may comprise three quarters of their annual diet. They also eat berries, fruits, seeds, buds, and flowers, as well as cultivated grains. Infrequently they even consume some animal foods, such as eggs or bird nestlings.

Red squirrels are also opportunistic, but most commonly feed on conifer seeds. In the northeastern states, one can often find piles of cone fragments directly under feeding perches, rather than heaped in "middens" as occurs in the west. Red squirrels also eat fungi, buds, and the inner bark of trees. They also occasionally eat nuts and seeds, fruits and grains, and insect larvae and bird nestlings.

As with all wildlife, homeowners should be careful not to artificially supplement the natural foods of gray or red squirrels, whether through direct feeding with stale bread or other baked goods, or through carelessly hung birdfeeders that spill or are easily raided. For further information and helpful cautions, visit the *MassWildlife* website at [http://www.mass.gov/dfwele/dfw/wildlife/living/pdf/living\\_with\\_suburban.pdf](http://www.mass.gov/dfwele/dfw/wildlife/living/pdf/living_with_suburban.pdf).

**Reproduction:** Gray squirrels use both leaf nests and natural cavities for shelter and for rearing the young. Leaf nests are most commonly constructed in hardwoods; cavities in live trees are preferred over those in snags. Gray squirrels usually breed at about 10-14 months of age. Usually, yearlings have only one litter per year, but adults may breed twice annually, depending on food availability. Winter breeding occurs in January-February, and summer breeding from May to July. The two to three feeble young are born after a 44-45-day gestation period and are weaned at 8-10 weeks. Red squirrels tend to prefer tree leaf nests over cavities, but sometimes use rock dens and burrows. Age at first breeding is 10-12 months. Red squirrels typically have a single litter (two are rare), with one to seven young born during March-May after a 31-35-day gestation period. The young are weaned at 7-8 weeks.

**Activity:** Gray squirrels are crepuscular (active at dawn and dusk) in spring, summer, and autumn, but are active only during midday in winter. These squirrels may be especially active in fall, when nuts are available, because squirrels cache food items. However, frequency of squirrel sightings may also relate to changes in population size. Young squirrels disperse from spring through fall, usually traveling no more than two miles from their birthplace. Gray squirrels are not territorial, but may defend the immediate area around a nest site. Red squirrels, on the other hand, are active during the daytime, but may rest during periods of intense midday heat. In severe winter weather, they may remain inactive in their nests. Juveniles establish home ranges on, or adjacent to, that of their mother. They are territorial and defend their areas against other red squirrels.

Red Squirrel



Photo © by Bill Byrne

## Preventing Conflicts

Gray squirrels are responsible for more damage than are red squirrels, especially in urban or suburban areas, but red squirrels will sometimes chew maple syrup lines. Squirrel damage to home vegetable or flower gardens, or to orchards, is often difficult to control. When populations are high, and food sources are abundant, new squirrels will quickly replace any that are removed. To avoid or reduce damage and make your property less attractive to squirrels, consider these options:

**Exclusion:** Electrified netting or other small electric fences may be useful in keeping squirrels out of gardens and small orchards. Contact your local farm supply business or a *MassWildlife* District office (see the *MassWildlife* website at <http://www.mass.gov/dfwele/dfw/facilities/districts.htm> for phone numbers and directions) for information on electric fences. A small dome or cage of chicken wire placed over individual plants or small rows can protect individual plants until they get large enough to be uninteresting to the squirrels.

**Buildings:** Gray squirrels will enter attics, crawl spaces, or sheds for nesting or shelter. In doing so, they may damage the structure, pull apart insulation, or chew electrical wires. Inspect your property regularly to be sure that squirrels have not entered or attempted entry. Close openings with heavy-gauge  $\frac{1}{2}$ -inch wire mesh or other appropriate carpentry repairs. Be careful not to block squirrels inside as they may do considerable damage trying to get out. Trim branches and trees within 6-8 feet of the building, to prevent squirrels from jumping onto your roof. Prevent squirrels from walking on wires by installing 2-foot sections of 2-3-inch plastic pipe over the wire. The piping will rotate on the wire, causing the squirrels to fall off. Do not place pipes on utility wires without permission from the utility company.

**Bird Feeders:** Bird feeders that hang from wires may be protected with rotating piping (see above). Feeders on poles may be protected with commercial conical squirrel guards that prevent a climbing squirrel from getting past the cone. Remember that spilled seed attracts mice and squirrels to the ground below the feeder; predators may then be attracted to the rodents. In general, you should carefully consider the pros and cons of feeding birds, especially in the warmer seasons when they do not need supplemental food.

**Repellents:** Mothballs may sometimes discourage squirrels from using crawl spaces or other enclosed spaces, but do not use mothballs in human-occupied dwellings. One of the commercial taste repellents (Ro-pel® or any other similar product\*) can be applied to seeds, bulbs, flowers, shrubs, fences, and siding to discourage squirrels. Consult with your local agriculture extension specialist and follow all instructions. Effectiveness may vary. *Do not* use anticoagulants containing warfarin such as D-Con® or any other similar product\*: These are formulated for and are legal only for use on rats and mice inside buildings. Squirrels may only be sickened by warfarin, and dead squirrels may cause secondary poisoning of raptors, domestic pets, and other scavengers. Further, it is illegal to use poisons to eliminate wildlife, even if the animals are in a dwelling or other building.

**Trapping:** Traps may be effective in removing squirrels trapped within an attic or other confined space. Before attempting to trap squirrels, be aware that in Massachusetts wildlife may not be live-trapped and relocated elsewhere (see the *MassWildlife* website at [http://www.mass.gov/dfwele/dfw/wildlife/living/moving\\_wildlife.htm](http://www.mass.gov/dfwele/dfw/wildlife/living/moving_wildlife.htm) for more information). Do not trap squirrels unless you are willing to release them outdoors on site (such as an animal removed from

---

\*Please note that brand names are used for illustrative or comparative purposes only. This is not a specific recommendation by the Division of Fisheries and Wildlife.



Photo © by Bill Byrne

a cellar) or to destroy them humanely. Gray squirrels can often be captured in wooden or wire box traps 24 inches in length by 10 inches in height. Apple slices, peanut butter, or sunflower seeds are good baits. Wire traps are more effective when covered with canvas or other dark material. The squirrel may then be released outside the building, but be sure that the animal's original entryway is blocked.

**Shooting:** Shooting is quick, simple, and effective in areas where firearm discharge is safe and legal. A .22 caliber rifle or a shotgun with #6 shot is suitable. This method may be most effective when targeting a few persistent animals. During population peaks, or in areas where foods are particularly attractive, new squirrels will quickly replace those that are removed.

Squirrels are an important natural resource in Massachusetts. They are classified as a game species, with established, regulated hunting seasons (see the current Abstracts, or the *MassWildlife* website at [http://www.mass.gov/dfwele/dfw/regulations/abstracts/hunt\\_fish\\_abstracts.pdf](http://www.mass.gov/dfwele/dfw/regulations/abstracts/hunt_fish_abstracts.pdf), for dates and specific regulations).

If you have questions or are experiencing problems with gray or red squirrels, contact your nearest *MassWildlife* District office (see the *MassWildlife* website at <http://www.mass.gov/dfwele/dfw/facilities/districts.htm> for phone numbers and directions).

Further information on squirrels and other wildlife is also available at [http://www.mass.gov/dfwele/dfw/wildlife/wildlife\\_home.htm](http://www.mass.gov/dfwele/dfw/wildlife/wildlife_home.htm).



For more information contact *MassWildlife* at:

**Western Wildlife District, Pittsfield:** (413) 447-9789

**Connecticut Valley Wildlife Dist., Belchertown:** (413) 323-7632

**Central Wildlife District, West Boylston:** (508) 835-3607

**Northeast Wildlife District, Acton:** (978) 263-4347

**Southeast Wildlife District, Bourne:** (508) 759-3406

**Field Headquarters, Westborough:** (508) 389-6300

or visit our website at [www.mass.gov/dfwele/dfw](http://www.mass.gov/dfwele/dfw)



**MassWildlife**



Photo © by Bill Byrne

# Living With Wildlife

## Wild Turkey in Massachusetts

At the time of colonial settlement, the wild turkey was widespread in Massachusetts. As settlement progressed, hardwood forests were cut and the range of the turkey began to shrink. The last known native bird was killed in 1851. After the Civil War, land use patterns began to change. Farms were abandoned and the forests regenerated. After several unsuccessful attempts at restoring turkeys, MassWildlife managers learned that trapping and relocating wild birds was a successful restoration strategy in other parts of the country. Biologists captured 37 birds in New York and released them in southern Berkshire County between 1972 and 1973. The new flock grew, and by the fall of 1978 the estimated population was about 1,000 birds. With birds also moving in from adjacent states, turkeys soon ranged throughout most parts of Massachusetts west of the Connecticut River. In-state transplants of the birds, conducted until 1996, continued to expand the range of the bird into the central, northeastern and southeastern parts of the state. The estimated population now exceeds 18,000 birds! In the 1990s, the wild turkey was named the state's official game bird. Under careful management, the future looks bright for turkeys; sportsmen, naturalists and other wildlife enthusiasts welcome their return.

**Description:** The wild turkey is a strikingly handsome bird. Black to blackish-bronze with white wing bars, blackish-brown tail feathers and a bluish-gray to red head, "toms" or male wild turkeys weigh about 16 to 24 pounds. They sport a hair-like "beard" which protrudes from the breast bone. When a tom is strutting, its head turns a bright red. Females, called hens, are smaller - about 9 to 12 pounds.

**Life History:** Turkeys are active during the day, roosting at night to avoid predators. In residential areas, it is not uncommon for turkeys to roost on railings, roofs, or sometimes on vehicles. Gobbling, during breeding season, usually starts around mid-March, peaking in early May. This is when the males puff out their feathers, fan their tails and "strut their stuff." Hens lay eggs after the first mating. The nest is a shallow, leaf-lined depression on the ground, and contains 12 to 15 eggs. Hatching occurs after an incubation period of 28 days. Broods usually appear in the first week of June. The young poult are active as soon as they hatch. Predators such as foxes and goshawks may take a few young turkeys, and cold spring rains can easily chill the poorly-feathered young birds. Young turkeys remain with their mother for at least 4 to 5 months. Turkeys learn from each other, often by imitation, and, by associating with older more experienced birds, remember the layout of their home ranges and the location of various foods.

**Food:** Adult turkeys feed mainly on plant material, including acorns, nuts (especially hickory), grapes, skunk cabbage, barberry and other berries and tubers. They will scratch the ground seeking food. Poult feed heavily on insects during the summer. During the winter, open springs and seeps are an important source of food.

**The Pecking Order:** Wild turkeys live in flocks organized by "pecking order." This pecking order is a social ranking in which each bird is dominant over or "pecks on" birds of lesser social status. Pecking order has implications for people and nuisance turkeys. Turkeys may attempt to dominate or attack people that the

birds view as subordinates. This behavior is most noticeable during breeding season. Once bold behavior is established, it can be very difficult or impossible to change. Turkeys may also respond aggressively to shiny objects or reflections. Since the stimulus to drive away the "intruder" is strong, and since the reflection does not disappear when the turkey confronts it, the bird will often continually display towards or attack the reflection until changing light conditions cause it to vanish.

#### **PREVENTING CONFLICTS WITH TURKEYS**

**DON'T FEED TURKEYS** — Keep wild things wild! Feeding, whether direct or indirect, can cause turkeys to act tame and may lead to bold or aggressive behavior, especially in the breeding season.

**KEEP BIRD FEEDER AREAS CLEAN** — Use feeders designed to keep seed off the ground, as the seed attracts turkeys and other wild animals. Clean up spilled seed from other types of feeders daily. Remove feeders in the spring, as there is plenty of natural food available for all birds.

**DON'T LET TURKEYS INTIMIDATE YOU** — Don't hesitate to scare or threaten a bold, aggressive turkey with loud noises, swatting with a broom or water sprayed from a hose. A dog on a leash is also an effective deterrent.

**COVER WINDOWS OR OTHER REFLECTIVE OBJECTS** — If a turkey is pecking at a shiny object such as a vehicle or window, cover or otherwise disguise the object. Harass the bird by chasing it, squirting with a hose or other means of aggression.

**PROTECT YOUR GARDENS AND CROPS** — You can harass turkeys searching for food in your gardens. Dogs tethered on a run can also be effective in scaring turkeys away from gardens. Netting is another option to employ. In agricultural situations, some scare devices are effective.

**EDUCATE YOUR NEIGHBORS** — Pass this information along: Your efforts will be futile if neighbors are providing food for turkeys or neglecting to act boldly towards the birds. It requires the efforts of the entire neighborhood to help keep wild turkeys wild.

Turkeys are important and valuable birds in Massachusetts. They are classified as game birds for which regulated hunting seasons and management programs have been established. If you are experiencing problems with turkeys or have any questions regarding them, contact your nearest MassWildlife District Office. More detailed information on turkeys is also available on our website: [www.masswildlife.org](http://www.masswildlife.org).



---

For more information contact MassWildlife at:

**Western Wildlife District, Pittsfield:** (413) 447-9789

**Connecticut Valley Wildlife Dist., Belchertown:** (413) 323-7632

**Central Wildlife District, West Boylston:** (508) 835-3607

**Northeast Wildlife District, Acton:** (978) 263-4347

**Southeast Wildlife District, Bourne:** (508) 759-3406

**Field Headquarters, Westborough:** (508) 389-6300

or visit our website at [www.mass.gov/masswildlife](http://www.mass.gov/masswildlife)

---



# Living With Wildlife

## Woodchucks in Massachusetts

**MassWildlife**



Photo © by Bill Byrne

Woodchucks are common and abundant in Massachusetts. They are found everywhere in the state except on Martha's Vineyard and Nantucket. Often called "groundhogs" or "whistle-pigs," they are not in the pig family at all. Woodchucks are burrowing members of the squirrel family (Sciuridae), which includes tree squirrels, flying squirrels, and chipmunks. In the western U.S., there are five related species called "marmots."

**Description:** Woodchucks (*Marmota monax*) are medium-sized, chunky, ground-dwelling squirrels. Males are larger than females, but otherwise the sexes look similar. Adults measure 20-27½ inches in total length, with the tail averaging 4-7 inches. Adult weight will vary widely through the year, from an average of 7¾ pounds

in the early spring to an average of 10½ pounds in the fall. This is because they are deep hibernators, and their weight will differ substantially between den entry and emergence.

The woodchuck has rather coarse, reddish-brown fur grizzled with guard hairs that are gray with yellow tips; brown or black tail, legs, and feet; and a black face. Melanistic (black) animals occur but are uncommon. Woodchucks have short powerful legs and short ears. The incisor teeth grow continually and must be worn down when feeding or else the tooth will grow to a length that injures or impairs the animal.

**Habitat:** Woodchucks are an "edge" species, living in hedgerows or brush clumps along old fields, pastures, or croplands intermixed with small woodlands. Burrows are dug in well-drained soil along woodland edges and brushy hedgerows, often on rather steep slopes. The animal will also burrow under sheds, porches, decks, or walkways. Burrows are a critical feature of their life style, and typically include multiple entrances. The main shaft may be up to 50 feet in length, with many side passages. The 'chuck usually piles up a mound of dirt and rocks at the burrow entrance, but the entry may otherwise be well-concealed.

**Foods:** Woodchucks are generalist plant feeders, consuming a wide variety of herbaceous (soft or leafy) vegetation. Studies in Maryland identified 34 plants while a study in Pennsylvania found 46 that were eaten by woodchucks. Clover, wild lettuce, grasses, chickweed, and dandelion appeared among the preferred species. The animals also readily eat hay grasses, alfalfa, corn, and a variety of common garden or commercial crops. Woodchucks readily climb trees and may feed on leaves of certain species, such as mulberry. They may also gnaw woody stems or trees, primarily in spring.

**Reproduction:** Woodchucks mate in March and April shortly after emergence from hibernation. They can first breed as yearlings (i.e., in their second summer), however only 20-40% of female yearlings do breed. The tiny, feeble young are born in the burrows after a gestation period of 30-32 days. Based on data from studies of captive animals, litter size averages four to five young. The pups emerge from the den at about 33 days and are weaned at about 42 days.

**Activity:** Woodchucks are typically daytime animals. During most of the year, their activity peaks in mid-morning and again in the late afternoon, but declines at mid-day. Early and late in the season they may be active only in the afternoon. They enter hibernation in late fall and emerge in early spring. The hibernation period is about 4-4½ months in Pennsylvania and 5 months in upper New York. Their home range is determined by food availability, but is typically between ¾-2¼ acres. Home ranges of adult males may overlap those of females, but usually not those of other males. Woodchucks disperse from their birth area when less than 1 year old, females traveling perhaps ¼ mile and males ⅓ mile. Woodchucks are quite wary and on the alert around their burrow entrance and while feeding.

## Preventing Conflicts

Woodchuck damage to home vegetable or flower gardens is often difficult to control. Homeowners need to keep in mind that, when populations are high and food sources are abundant, new woodchucks will quickly replace those that have been eliminated. To avoid or reduce damage and make your property less attractive to woodchucks, consider the following options.

**Exclusion:** Fencing can help alleviate woodchuck damage, but woodchucks are good climbers, so fences should be at least 3 feet high, constructed of heavy chicken wire or 2-inch mesh welded wire. Bury the lower edge 10-12 inches deep to prevent 'chucks from burrowing under it. An electric wire 4-5 inches off the ground and 4-5 inches from the fence, powered by an approved fence charger, will discourage woodchucks from climbing. Electrified netting is also effective. Contact your local farm supply business or a *MassWildlife* district office (see link below) for information on electric fences. As an alternative, bend the top 15 inches of the fence outward at a 45° angle.

**Structures:** Woodchucks may burrow under sheds, porches, walkways, or other structures. Be proactive and securely block up all possible crevices, cracks, and holes prior to any use by woodchucks. Examine these areas regularly. Boards, fencing, or stones may have to extend 12 inches or more into the ground to prevent tunneling. If 'chucks get into these places, you may have to block them repeatedly. Be careful not to block such places when woodchucks may be trapped inside.

**Fumigants:** Woodchucks may be killed in their burrows with commercial gas cartridges that produce carbon monoxide and other gases. First, you need to find the main burrow entrance and all secondary holes. Block all holes except the main one with a chunk of sod. Ignite the cartridge, throw it down the hole, and block up the hole. Watch for smoke emissions, which indicate a poor seal. Follow all directions on the cartridge. *Do not* use gas cartridges under sheds, porches, or other buildings. Do not use the cartridges on other animals. Remember that woodchucks are abundant and new animals may try to reoccupy the area later.

**Repellents:** Commercial animal repellents such as "Hot Sauce Animal Repellent"®, Hinder®, emetics, and insecticides have been used to deter woodchucks from damaging squash, tomatoes, lettuce, and other crops, generally with minimal success\*. Efficacy may relate to palatability and frequency of exposure. Some repellents may not be legal for use on woodchucks or on products used for human consumption. Repellents tend to deteriorate on exposure to the elements and may not be long-lasting. Poisons of any kind should never be used. Not only is it illegal to use poisons to eliminate wildlife, even if the animals are in a building, but woodchucks may only be sickened by poisons, and dead, poisoned woodchucks may cause secondary poisoning of raptors, domestic pets, and other scavengers.

**Trapping:** Woodchucks can sometimes be captured in wire cage traps, placed at the main burrow entrance or in travel ways. Apples slices, carrots, or unwilted lettuce are good baits. However, if the available foods are attractive, woodchucks may be reluctant to enter traps. Before attempting to trap woodchucks, be aware that, in Massachusetts, wildlife may not be relocated (see the *MassWildlife* website at [http://www.mass.gov/dfwele/dfw/wildlife/living/moving\\_wildlife.htm](http://www.mass.gov/dfwele/dfw/wildlife/living/moving_wildlife.htm) for more information). Do not trap woodchucks unless you are willing to release them on site (such as an animal removed from a cellar) or to destroy them humanely.

**Shooting:** Shooting is quick, simple, and effective in rural areas where firearms discharge is safe and lawful. A .22 caliber centerfire rifle is commonly used for this purpose. At close ranges (<25 yards), a 12-gauge shotgun with #4-6 shot may be effective. This method will be most useful when targeting a few persistent animals. But, again, during population peaks, or when foods are particularly attractive, new woodchucks will quickly move in to replace those that have been removed.

Because they are abundant, Massachusetts has a 50-week hunting season on woodchucks. Nevertheless, they are not a particularly desirable game species for most hunters. If you have questions or are experiencing problems with woodchucks, contact your nearest *MassWildlife* district office (see the *MassWildlife* website at <http://www.mass.gov/dfwele/dfw/facilities/districts.htm> for phone numbers and directions). Further information on woodchucks and other wildlife is also available at [http://www.mass.gov/dfwele/dfw/wildlife/living/living\\_home.htm](http://www.mass.gov/dfwele/dfw/wildlife/living/living_home.htm).

---

\*Please note that brand names are used for illustrative or comparative purposes only. This is not a specific recommendation by the Division of Fisheries and Wildlife.



For more information contact *MassWildlife* at:

**Western Wildlife District, Pittsfield:** (413) 447-9789

**Connecticut Valley Wildlife Dist., Belchertown:** (413) 323-7632

**Central Wildlife District, West Boylston:** (508) 835-3607

**Northeast Wildlife District, Acton:** (978) 263-4347

**Southeast Wildlife District, Bourne:** (508) 759-3406

**Field Headquarters, Westborough:** (508) 389-6300

or visit our website at [www.mass.gov/dfwele/dfw](http://www.mass.gov/dfwele/dfw)

**MassWildlife**

"Balancing the needs of wildlife with the needs of people."

